

## ABSTRACT OF THE DISCLOSURE

A plurality of discharge sections are formed in an optical resonance space and are provided with electrodes that are mutually different in for example shape, size and construction. Laser medium gas flows through a circulatory passage passing through a fan and heat exchangers. Mutually different modes can be obtained when discharge is produced independently in the discharge sections. When discharge is produced in both of the discharge sections, the various intermediate modes can be obtained, in accordance with the distribution of power supplied from power sources for discharge excitation that are independently operated. If the number of discharge sections is three or more, it is possible to control the distribution of the discharge power that is supplied to the discharge sections in regard to at least two discharge sections of these discharge sections, and the shape and dimensions of the discharge sections or shape, dimensions and construction of the electrodes are selected such that "different modes are excited when independently discharged".